

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 1.28**WELDING INSPECTION REPORT****Resident Engineer:**Siegenthaler, Peter**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-019235**Date Inspected:** 12-Jan-2011**Project Name:** SAS Superstructure**OSM Arrival Time:** 900**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1730**Contractor:** American Bridge/Fluor Enterprises, a JV**Location:** Jobsite**CWI Name:** See below**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** SAS OBG**Summary of Items Observed:**

On this date CALTRANS OSM Quality Assurance Inspector (QAI) Bert Madison was present at Yerba Buena Island in California between the times noted above for observations relative to the work being performed by American Bridge/Fluor Enterprises (AB/F) personnel at the locations noted below.

- 1). OBG Field Splice of East Line Lifting Lug Hole Insert Weld (Fit-up and SMAW)
- 2). OBG Field Splice 7E/8E Weld ID: B1, C1, C2, D1, D2, E1, E2 & F1 – (QA verification)
- 3). OBG Field Splice 9W/10W Weld ID: D1 & D2, Face A (QAI Fit-Up Verification)

- 1). OBG Field Splice of East Line Lifting Lug Hole Insert Weld (Fit-up and SMAW)

Exterior: OBG 5E PP35 E3 weld 2

The QAI periodically observed AB/F approved welder Salvador Sandoval (ID 2202) performing fit-up and welding from the exterior of OBG 5E PP35 E3 weld 2 per the Shielded Metal Arc Welding (SMAW) process in the 1G (flat) position. QC Inspector Steve McConnell was periodically present to monitor the progress and verify that the welding parameters were within the limits established by the approved welding Procedure Specification (WPS) identified as ABF-WPS-D1.5-1070. Welding was completed and the QAI observed that the work at this location appeared to be in general compliance with contract documents.

- 2). OBG Field Splice 7E/8E Weld ID: B1, C1, C2, D1, D2, E1, E2 & F1 – (QA verification)

The QAI performed verification Ultrasonic Testing (UT) of 10% of the lengths of OBG Field Splice 7E/8E Weld ID: C1, C2, D1, D2, E1 & E2 and 35% of the lengths of OBG Field Splice 7E/8E Weld ID: B1 & F1. The OBG Field Splice 7E/8E Weld ID: B1, C1, C2, D2, E1, E2 & F1 verified by the QAI appeared to be in general compliance with contract documents. The OBG Field Splice 7E/8E Weld ID: D1 did not appear to be in general compliance with contract documents. See Ultrasonic Testing Report Form TL-6027 generated by the QAI on this

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date. The QAI spoke with QC Lead Inspector Bonafacio Daquinag Jr. regarding the areas observed by the QAI that did not appear to be in compliance. See Summary of Conversations below.

3). OBG Field Splice 9W/10W Weld ID: D1 & D2, Face A (QAI Fit-Up Verification)

The QAI arrived at OBG Field Splice 9W/10W Weld ID: D1 & D2, Face A and met with QC Inspector Tony Sherwood. Upon arrival Mr. Sherwood informed the QAI that the fit-up inspection had been completed by QC. See Summary of Conversations below. The QAI observed that other than one approximately 300mm long area, the OBG Field Splice 9W/10W Weld ID: D1 & D2 appeared to be in general compliance with contract documents. The QC Inspector and the QAI performed the final dimensional verification inspection of the 300mm area identified with misalignment in excess of that allowed (2mm). The QA Inspector and the QC Inspector worked simultaneously to accurately record the planar misalignment of the D1 plate prior to the full length tack welds joining the two bottom plate members were completed. After the dimensional measurements were completed the QC/QA Inspector noted the following locations were recorded as unacceptable planar misalignment:

The unacceptable planar misalignment was located at (1) one location:

Y = 3540mm to Y = 3570mm - 3mm misalignment (30mm in length)

Y = 3571mm to Y = 3620mm – 5mm misalignment (50mm in length)

Y = 3621mm to Y = 3760mm - 6mm misalignment (140mm in length)

Y = 3761mm to Y= 3850mm - 4mm misalignment (90mm in length)

Y = 3851mm+ - 2mm misalignment or less.

The total planar misalignment was 310mm or 7.29% of the total length of the weld joint.

The QA Inspector noted the planar misalignment identified above exceeds that allowed in AWS D1.5-02 section 3.3.3.

Summary of Conversations:

From item 2 above: The QAI spoke with Mr. Daquinag regarding (2) two Class A rejectable indications observed by the QAI in Weld ID 7E/8E D1. The QAI informed Mr. Daquinag that the indications would need to be confirmed by QC during this shift repaired within 24 hrs. Mr. Daquinag stated at approximately 14:30 hours that the QC Inspector Jesse Cayabyab was going to go directly to the location and perform confirmation testing. Mr. Daquinag also stated that the UT rejectable indication discovered at the Deck Access Hole (DAH) at OBG 5E-PP29.5-E2 during QAI UT verification testing on 01-10-10 would be repaired on 01-13-11.

From item 3 above: QC Inspector Sherwood informed the QAI that one isolated area of misalignment in excess of that allowed (2mm) was identified and requested the QAI to verify the amount of misalignment. Mr. Sherwood also requested the QAI to verify that the remainder of the joint was within tolerances.

Other conversations on this date with Quality Control Inspectors were general in nature and pertained to locations of welding and QC activities and locations of welds released to the QAI for verification testing.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Nina Choy (510) 385 5910, who represents the Office of Structural Materials for your project.

Inspected By: Madison,Bert

Quality Assurance Inspector

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Reviewed By: Levell,Bill

QA Reviewer